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ARTICLE XVII.

Astronomical Observations, made at several Places in the United States. By

J. N. Nicollet. Read May 6, 1842.

Baltimore, (Md.,) at the Botanical Garden of St. Mary's College. Latitude 39° 17′ 55″. Longitude 5h 6m 30s. (?)

I. A transit of Mercury, observed May 4, 1832, by J. N. Nicollet. Beginning of the transit; invisible in the United States.

End of the transit, { Interior contact of limbs, 22^h 28^m 37^s.2 Centre of Mercury, 29 33 .9 Exterior contact of limbs, 30 46 .6 } Mean time of the place.

Remark.—The morning was generally cloudy, but, still, successive openings of several minutes' duration afforded ample opportunities of following up the progress of the transit, during which the planet was very distinct, and its outline well defined. The disc of the sun, during the second and third observations, was very clear, which circumstance leads me to believe that the times of these last are very correct. The observations were made with a Dollond telescope, having a magnifying power of about 100.

The Rev. Mr. A. Verot, Professor of Mathematics and Natural Philosophy in St. Mary's College, recorded the time and other circumstances of the observations.

II. Immersion by Moon's dark limb of γ . Libræ, observed July 7, 1832, at 10^h 00^m 04^s .63, mean time, by J. N. Nicollet. Sky cloudy at intervals, but clear at the moment of the observation. A Dollond telescope, having a magnifying power of about 100.

III. A solar eclipse, observed July 26, 1832, by J. N. Nicollet, and the Rev. Mr. A. Verot.

Beautifully clear sky. N. W. wind, tolerably strong. The Dollond telescope used by Mr. Nicollet for the beginning of the eclipse, had only a magnifying power of about seventy or eighty; but for the observation of the end, this power was replaced by another of about one hundred and ten or one hundred and twenty. Rev. Mr. Verot's telescope's power was but twenty-five or thirty. Professor Julius T. Ducatel counted the time by the chronometer, and recorded the observations.

IV. Immersion γ . Capricorni by Moon's dark limb, observed November 28, 1832, at 6^h 12^m 10^s .25, mean time, by J. N. Nicollet.

Clear sky. A Dollond telescope, having a magnifying power of about one hundred.

- V. Immersion ν . Piscium, observed March 12, 1834, at $7^{\rm h}$ $26^{\rm m}$ $50^{\rm s}$, mean time, by the Rev. Mr. Verot.
- VI. Immersion χ . Capricorni, September 14, 1834, at 8^h 13^m 41^s , mean time, observed by the Rev. Mr. Verot.
- VII. Immersion γ^2 . Aquarii, November 9, 1834, at 5^h 43^m 00^s , mean time, observed by the Rev. Mr. Verot.
 - VIII. A solar eclipse, November 30, 1834, observed by the Rev. Mr. Verot.

Beginning of the eclipse,
$$0^h 51^m 58^s .8$$
 End " " $331 31 .2$ Mean time.

- IX. Immersion χ . Geminorum, May 3, 1835, at 10^h 27^m 45^s, mean time, observed by the Rev. Mr. Verot.
 - X. A transit of Mercury, November 7, 1835, observed by the Rev. Mr. Verot.

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Beginning of the transit,  \left\{ \begin{matrix} \text{Exterior contact not observed.} \\ \text{Centre of Mercury,} & 0^\text{h} \ 27^\text{m} \ 12^\text{s} \\ \text{Interior contact,} & 0 \ 28 \ 08 \end{matrix} \right\} \text{ Mean time.}
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XI. A solar eclipse, May 14, 1836, observed by the Rev. Mr. Verot.

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Beginning of the eclipse, 18^h 53^m 45^s End, " " 21 19 32 Time by the chronometer.
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Chronometer. Sun's centre's altitude.

For the calculation of the time, $\begin{cases} 19^h 5^m 9^s & 25^{\circ} 42' 32'' .7 \\ 2039 39 & 43 52 35 .1 \end{cases}$ Thermometer 55° 0.

Error of the sextant 15" additive to the sun's altitude.

XII. A solar eclipse, September 18, 1838, observed by the Rev. Mr. Verot.

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Beginning of the eclipse, 3^h 7^m 22^s
Formation of ring, 4 25 33
Rupture of ring, 4 30 54
End of the eclipse, 5 40 41
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XIII. Milledgeville, (Geo.,) State House, Senate Hall.

Latitude 33° 4′ 30″, (?) Longitude 5h 33m 20s, (?)

A total eclipse of the sun, November 30, 1834, observed by J. N. Nicollet.

Remark.—Mr. Nicollet was supplied with a telescope kindly procured for him by Dr. Milton Antony, and was zealously assisted by Doctors Dugas and Ford, of the Medical College of Augusta, (Ga.)

XIV. June 30, 1838. Red pipe stone quarry, on the Coteau des Prairies, Sioux Indian Country, Iowa Territory.

Latitude 44° 00′ 52″. Longitude 6h 25m 173.

Immersion α . Virginis, at 10^h 43^m 7^s .28, mean time, observed by J. N. Nicollet, and his assistant Lieutenant, Charles Tremont, of the Corps Topographical Engineers.

XV. September 18, 1838. Ti tanka Taminan Lake, (east shore of,) on Lahontan River, Sioux Country, Iowa Territory.

Latitude 44° 16′ 41″. Longitude 6h 13m 23s.

A partial eclipse of the sun, observed by J. N. Nicollet.

Beginning of the eclipse not observed.

End, " " 4h 18m 6s .85, Mean time.

Clear sky. Dollond telescope, having a magnifying power of about 100.

XVI. September 18, 1838. Goebel's residence, near Newport, Franklin County, Missouri.

Latitude 38° 33′ 58″. Longitude 6h 4m 28s.6

A partial eclipse of the sun, observed by Mr. D. W. Goebel.

Beginning of the eclipse 1^h 53^m $16^s.77$ End, " 4 40 42.22 Mean time.

The magnifying power of Mr. Goebel's telescope was about forty.

XVII. July 6, 1839. At Mr. Nicollet's encampment, on the Coteau du Missouri, Yanktonan Indian country.

Latitude 44° 51′ 11″. Longitude 6h 36m 18s

An Immersion n. Tauri, at 15^h 49^m 35^s.5, mean time, observed by Mr. Nicollet.

XVIII. November 20, 1839. City of St. Louis, Missouri, at the Garden of the Cathedral.

Latitude 38° 37′ 28″. Longitude 6h 1m 0s.7

Immersion η . Tauri at 6^h 12^m 14^s .7, P. M., mean time, observed by Mr. Nicollet.

XIX. June 5, 1841. At Goebel's Residence, near Newport, Franklin County, Missouri.

Latitude 38° 33' 58". Longitude 6h 4m 28s .6

Immersion σ. Sagittarii at 15^h 40^m 7^s .94, mean time, observed by Mr. D. W. Goebel.

XX. June 26, 1842. Fort Charlotte, old American trading house, northwest shore of Lake Superior, at the west end of the Grand Portage.

Latitude 47° 58′ 34″. Longitude 89° 59′ 31″.

A partial eclipse of the sun.

Beginning of the eclipse 6^h 7^m 1^s 0 Mean time. End, " 713 19 2

Observation made by James Ferguson, then the astronomer to the American commission for determining the northern boundary; now one of the distinguished assistants of the United States coast survey, under the superintendence of Mr. Hassler.

The telescope used by Mr. Ferguson was of two and a half feet focal length, and the magnifying power of about sixty.

J. N. NICOLLET.